

Walk in the Horse (even 4-beat gait)

The walk is a gait of four evenly spaced beats, with no suspension phase. In a moderate walk, the gait shows alternate suspension by two or three legs. In an extremely slow walk (e.g., in a grazing animal) the support may alternate between three and four feet. In general a walk may speed up to the point where the support is alternating between one and two legs, but when this happens, the resulting gait is rarely an even succession of footfalls. This gives some kind of an "easy" gait, typical of a number of breeds with variants going under a variety of names. I will follow Muybridge and use "[amble](#)" for this class of gaits, including all gaits where the body is alternately supported by one or two legs, with no suspension phase.

Muybridge concluded that essentially all mammals followed the footfall sequence of the horse when executing a walk on four legs (or legs and arms, in the case of a human being). The sequence is shown below. Note that the two-legged support phase invariably involves a front and a rear foot, never both rear legs or both forelegs. The two-legged phase has a diagonal pair on the ground when the non-supporting foreleg is reaching forward and the non-supporting rear leg is extended to the rear. When the lateral pair (same side) is supporting, the non-supporting legs appear between the supporting legs.



First image, end of three-legged support phase, right foreleg off the ground and left rear pushing off. Second and third images, diagonal 2-legged support, non-supporting legs appearing outside of the two supporting legs.



Left two images, three-legged support phase with left hind foot off the ground. Right image, two-legged lateral support, with non-supporting legs between the supporting legs.



Continued two-legged lateral support, with touchdown of left rear leg in the right-hand photo.



Two left images show three-legged support with left front leg in the air. Right-hand image shows start of two-legged diagonal support. Note that the image on the far right is essentially the same as the first in the sequence, but with the left and right legs interchanged. The 12 images shown actually cover only half of the walking sequence, but the remainder is exactly the same with right and left legs reversed.

[Return to Animal motion index](#)